

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A packet communications method for carrying out packet communications between a base station and a mobile station located in an area controlled by the base station, the method comprising:

detecting a channel quality between the base station and the mobile station;  
detecting the amount of data buffered in a transmission buffer of a sender; and  
determining a modulation scheme to be used in the packet communications based on the channel quality and the buffered data amount.

Claim 2 (Original): The packet communications method according to claim 1, wherein the modulation scheme is determined such that a prescribed communication condition is satisfied, and that padding, which is added to the data buffered in the transmission buffer of the sender when the buffered data amount is less than a transmission unit size, becomes the minimum, based on the channel quality and the buffered data amount.

Claim 3 (Original): A base station that carries out packet communications with a mobile station located in an area controlled by the base station, the base station comprising:

a channel quality detecting unit that detects a channel quality between the base station and the mobile station;  
a buffered data monitoring unit that monitors the amount of data buffered in a transmission buffer of the base station; and  
a modulation scheme determination unit that determines a modulation scheme for the packet communications based on the channel quality and the buffered data amount in the transmission buffer.

Claim 4 (Original): The base station according to claim 3, wherein the modulation scheme determination unit determines the modulation scheme that satisfies a prescribed communication condition, and that makes padding, which is added to the data buffered in the transmission buffer when the buffered data amount is less than a transmission unit size, become the minimum, based on the channel quality and the buffered data amount.

Claim 5 (Original): A mobile station that carries out packet communications with a base station, comprising:

a channel quality detecting unit that detects a channel quality between the base station and the mobile station;

a buffered data monitoring unit that monitors the amount of data buffered in a transmission buffer of the mobile station; and

a modulation scheme determination unit that determines a modulation scheme for the packet communications based on the channel quality and the buffered data amount in the transmission buffer.

Claim 6 (Original): The mobile station according to claim 5, wherein the modulation scheme determination unit determines the modulation scheme that satisfies a prescribed communication condition, and that makes padding, which is added to the data buffered in the transmission buffer when the buffered data amount is less than a transmission unit size, become the minimum, based on the channel quality and the buffered data amount.

Claim 7 (Currently Amended): A computer readable medium including computer executable instructions, wherein the instructions, when executed by a processor, cause the processor to perform a method comprising packet communication program used in packet

~~communications between a base station and a mobile station located in an area controlled by the base station and installed in one of the base station and the mobile station that becomes a sender, the program comprising procedures of:~~

causing the sender to detect a channel quality between the base station and the mobile station;

causing the sender to detect the amount of data buffered in a transmission buffer of the sender; and

causing the sender to determine determines a modulation scheme for the packet communications based on the channel quality and the data amount in the transmission buffer of the sender.